

**Faculty Staff Diversity Mini-Grant Application.** Electronic submission is required. A signature page signed by each team member is required; please include a scanned/digitized copy with your submission or send the signature page separately to the Diversity and Inclusion Office.

**Project Title** (up to 25 words)

**Women Who Weld – College of Engineering Technology Community Outreach**

**List the members of the team and indicate their roles on the project. One member should be identified as Team Leader.**

1 (required) Brent Williams Role on team: Team Leader

2 (required) Bruce Hammond Role on team: Lab facility coordinator

3 (required) Sandra Larie Role on team: Administration, scheduling & registration

4 (optional) \_\_\_\_\_ Role on team: \_\_\_\_\_

5 (optional) \_\_\_\_\_ Role on team: \_\_\_\_\_

Add additional lines as necessary to list all team members

**Contact Information for Team Leader:**

**Brent M. Williams**  
*Associate Professor*  
Welding Engineering Technology

**Ferris State University**  
915 Campus Drive, Swan 220  
Big Rapids, MI 49307-2291  
Office: 231-591-2639  
Mobile: 920-740-7597  
Program: 231-591-2511  
Email: BrentWilliams@ferris.edu  
Website: ferris.edu/welding

**Project Summary/Abstract** If the application is approved the project summary will be posted on the Diversity and Inclusion Office website.

The focus of this project is to host a 1-day Women Who Weld workshop for 15-20 community participants that will provide introductory training and information about career opportunities in the industry. The workshop will be taught by founder Samantha Farr and is open to all individuals who identify as a woman. Lab activities will be supported by Ferris State University faculty and students from the AWS Student Chapter and Women in Technology organizations. Workshop participants will receive basic GMAW (MIG) training and receive information on career pathways that include welding, fabrication, technology and engineering. The immediate goal of the workshop is to inspire and encourage more women to consider careers in welding and other technology fields. Samantha Farr, founder and instructor of Women Who Weld, will also be a featured speaker at an AWS-sponsored info session the evening prior to the workshop – where everyone is invited to learn more about the program.

Women Who Weld is a Detroit-based, 501(c)(3) nonprofit organization that focuses on empowering women and preparing them to enter the skilled-trades workforce where they can enjoy financial stability in a long-term career. Several programs are offered through the organization that range from 6-week, single-week, and single-day workshops. Past events have been well-attended, with nearly 100% job placement rates for the 6-week course.

By sponsoring this event and partnering with Samantha Farr, Ferris State University stands to benefit from increased community awareness with the potential to recruit female students to programs like welding in the College of Engineering Technology. Past success of the Women Who Weld program has been in more metro areas – making this event an opportunity to test the potential in the Big Rapids and nearby communities. However, a similar event held in Traverse City (at NMC) with 15 female students resulted in 2 signing up for classes on campus.

**Project Narrative.** Please be Concise. Structure your narrative as follows. Do not omit any section.

1. Discuss the need for this project;
2. Provide a detailed description of the project, including how it will be implemented and the specific roles of each member of the team;
3. Provide the timeline for the project. Be sure to specify at what point the grant will be considered complete. Final Report is due within 3 months after completion;
4. Describe the target audience and indicate how many participants are expected. Discuss how the project will be publicized and promoted and, if appropriate, how participants will be selected.
5. Discuss specifically how the project relates to the current Ferris State University Diversity and Inclusion Plan;
6. List at least 3 measurable outcomes for this project/event. For each outcome, identify how it is connected with the Ferris State University Diversity and Inclusion Plan. Include a description of how the outcome will be assessed.

## The Need

The need for this project is driven by several factors. Ferris State University is located in an economically depressed, rural area with limited resources and programs of this nature. According to national statistics, female enrollment in the College of Technology is below average – so there is a significant opportunity to recruit and retain more females through inclusive programs. At the same time, Michigan has a shortage of skilled-trades workers with many jobs, in fields such as welding that go unfilled each year. These jobs represent career opportunities for unemployed and underemployed women from age 18 to 40 years in areas of advanced manufacturing.

Enrollment on campus is trending downward due to a decline in the number of Michigan high school graduates. This creates more competition among post-secondary educational institutions and as a result, increases the demand to recruit from the available pool. Ferris State University and the College of Engineering Technology can learn from this event and develop new recruiting tactics while building a higher level of community awareness among the women of Big Rapids, the FSU campus and nearby communities about the opportunities that exist in non-traditional fields like welding and technology.

Graduates of the traditional Women Who Weld programs are now employed in areas of Aerospace, Defense, Energy, Construction and Transportation industries throughout the nation – as are the graduates of many Engineering Technology fields offered at Ferris State University. This and future programs could improve female representation in campus programs and throughout local industries.

In addition to connecting people with jobs, Women Who Weld has connected several 1-Day workshop participants to college and continuing education programs. Ms. Farr recently held a 1-Day workshop with 15 women that prompted two of them to enroll in courses at NMC in Traverse City! One is joining the welding program this fall and the other is seeking continuing education classes.

We are excited to host the Women Who Weld event at the newly renovated SWAN ANNEX and connect with our local community

## The Project: Info Session & 1-Day Workshop

- **Info Session:** event will begin with an evening info-session hosted by founder, Samantha Farr. In her presentation she will discuss the many opportunities that women have in technology while highlighting her career path and exciting journey as a welding educator. The target audience will include the campus and nearby community with everyone welcome. Dinner will be provided by the AWS Student Chapter and attendance is limited to 80 people. Sign-up will be required for food estimates and will be coordinated by Sandra Larie in Swan 220. The cost would be FREE to attend.
- **The workshop:** will begin the following day with classroom and laboratory activities. Bruce Hammond will coordinate equipment and consumable setup with support from student volunteers. Brent Williams will coordinate the required faculty and student volunteers to support the event and ensure smooth operation of all equipment.
  - **Registration:** AWS Student Chapter Volunteers and Samantha Farr will greet registered participants when they arrive.
  - **Lecture Topics:** will include necessary instruction on safety, metals and gas metal arc welding (MIG) while being informed on the many career pathways for women in

welding and other technology fields. This will include discussion about Ferris State University programs and their role/impact on the welding industry.

- **Experiential Learning:** Participants will then be taught hands-on skills in the lab as they learn to produce visually acceptable welds on 3/16" thick carbon steel using the gas metal arc welding (MIG) process. During the workshop, participants will experience welding and related processes while learning of various opportunities and career paths that range from hands-on welding to welding engineering roles.
- **Program Costs:** Samantha Farr typically charges \$1500 per 1-Day workshop that is often divided among participants. Her program also benefits from donations, grants and other funding sources that are available in hosting-communities as well as her own. Miscellaneous costs would then include materials, consumables, welding equipment, and support.
- **Additional:** Women Who Weld carries their own liability insurance for the event – so no additional costs are anticipated.

### **The Proposed Workshop**

Our proposal is to *request funding to cover the typical 1-Day workshop costs* of \$1500, plus travel and hotel expenses for Women Who Weld founder, host and instructor – Samantha Farr.

- Ms. Farr will arrive to Big Rapids, MI and Ferris State University on **Friday, October 26, 2018** before presenting at the info session – which is FREE and open to everyone. She will require 1-night's lodging in Big Rapids and will host the official Women Who Weld event on Saturday, **October 27, 2018**.
- Workshop participants would be charged a nominal fee of \$25 each to encourage attendance. However, the fee would include their own personal protective gear (safety glasses, gloves, etc.), which is more than a \$25 value and theirs to keep after the course.
- Snacks with coffee and light refreshments will be provided in the morning/lecture session with a lunch provided at mid-day.
- Participants will gain basic skills and knowledge in the operation of gas metal arc welding (MIG) on 3/16" carbon steel in a variety of joint designs that are commonly used in industry.

### **Event Marketing & Registration**

Women Who Weld will create and provide the promotional content. Registration for the info-session will be managed by Sandra Larie and dinner will be coordinated by the AWS Student Chapter. Registration for the workshop will be handled by Samantha Farr using the Women Who Weld Eventbrite page. The workshop will also be promoted through the program and AWS Student Chapter, who will post information about the event to encourage participation by individuals on and off campus. Announcements and program fliers will be used to promote the event on and off campus with emphasis on digital media to control costs. Each participant will complete a basic survey to measure key metrics and outcomes.

## Local Community & Industry Support

Samantha has the ability to limit class sizes and manage waiting lists through her scheduling software. We have an opportunity to work with local communities and industry partners to promote and encourage participation. The following organizations will be sponsors/potential sponsors for the event:

- Ferris State University - Welding Engineering Dept.
- ITW / Miller Electric Manufacturing & Hobart Brothers Filler Metals
- Lincoln Electric Company
- Airgas
- Miller Welding Supply
- ALRO Steel
- American Welding Society – Ferris State University Student Chapter
- Women In Technology – Ferris State University Student Chapter

**Community partners:** the following organizations will be contacted to promote the event and for additional donations that may improve the event:

- Michigan Works
- Chamber of Commerce: Mecosta, Osceola, Lake, Newaygo, Montcalm, Wexford
- Local High Schools, adult education centers and Career/Tech Centers
- Local Businesses
  - Peacock Industries
  - Cadillac Fabrication
  - Yoplait USA – General Mills
  - Morbark Products
  - Nestle Waters
  - Nestle Gerber

## Target Audiences

We hope to learn who this program attracts within the campus and local, rural communities in comparison to the historic demographic within the more traditional, urban settings. The following outline specific audiences for each event:

- **Evening Info Session:** Target audiences for the info session would include all students and community members interested in learning more about Women Who Weld, Samantha Farr and her career. The event will be held in SWAN 229 which can accommodate 80 people + additional seating.
- **Women Who Weld 1-Day Workshop:** Open to anyone who identifies as a woman and wants to learn more about welding – and registration would be open to those on and off campus – making this an outreach project to our entire community. As our inaugural workshop, the class would be for 15-20 students with support from faculty and program students.
  - Female students currently attending FSU that are un- or *under*-decided
  - Females that may be undecided about upcoming post-secondary plans or that may be attending elsewhere
  - Local females who are entering the workforce that might consider welding or tech fields
  - Local females who are interested in welding as a hobby or potential career

## Relation to Diversity and Inclusion Plan

This program directly aligns with the Ferris State University Diversity plan in several ways:

- **Promoting Diversity:** the program actively recruits and promotes welding careers to a group that is currently underrepresented both at Ferris and in the workforce. In this way, the program is inclusive of non-traditional groups who may not be aware of opportunities nor understand that Ferris State offers leading educational programs and curriculum that are available to them.
- **Recruiting & Retaining a Diverse Population:** the info session and workshop help to recruit and retain a diverse student population by increasing awareness of opportunities for women to have successful careers in welding and other advanced manufacturing areas. Undecided students may find interest and choose a program within the CET.
- **Building a Diverse Community:** as host of our first Women Who Weld event, this is an opportunity to build and foster a new partnership with Samantha Farr while having an immediate impact on the lives of people in our community.

## Metrics and outcomes:

- **Attendance:** Participants will provide basic background information and comment on ideal program offerings. We will use this information to guide future offerings and promotion.
  - Who are they?
  - How did they hear of the event?
  - What worked well?
  - What should be different?
- **Interest & Awareness:** Participants will develop an interest in welding or technology fields and have an awareness of career opportunities after a 1-day workshop. We will determine if they know of and are interested in the following areas:
  - Hobbyist: Welding at home for projects, artwork other hobbies
  - Job-seeker: Interested in a welding job
  - Student: Considering a class, course or program in welding or technology
- **Welding Skills:** Participants will be able to weld various joints of carbon steel using the gas metal arc welding or MIG process following a 1-day workshop.
  - Turn ON and setup equipment
  - Determine and set parameters for welding
  - Demonstrate necessary welding techniques to produce visually acceptable results
  - Joints include: Lap, Tee, Corner – commonly used in industry

**Budget and budget Justification:**

1. Itemized list of expenses with a brief explanation of each;
2. Itemized list of funds anticipated from other sources;
3. Amount requested from the Faculty and Staff Diversity Mini-Grant.

<b>Cost Type</b>	<b>Estimate</b>	<b>Explanation</b>
Lodging	\$ 150.00	1-night lodging for Ms. Samantha Farr
Travel expenses	\$ 120.00	200+ miles
Honorarium	\$1500.00	Standard for hosting 1-day workshop
Promotional Materials	\$ 100.00	Includes posters from Media Production
Meals/Catering	\$ 500.00	Breakfast/lunch for 20+ during workshop
Program costs -Equipment, consumables, gases -Facility costs, overhead -Personal protective gear -Lab materials	\$2600.00	Program costs: \$400 Miller Welding Supply: \$500 AWS Student Chapter: \$400 ALRO Steel: \$400 Airgas: \$400 Participant Contribution: \$500
<b>TOTAL COST</b>	\$4970.00	
<b>TOTAL Donated/Funded:</b>	\$2600.00	
<b>TOTAL Requested:</b>	\$2370.00	

**Final Report.**

Expected completion date: November 1, 2018 Report due date: February 1, 2019